Rhodora

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CONTENTS

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THE GENUS SABATIA IN NEW ENGLAND.

M. L. Fernald.

(Plate 121.)

In southern New England the genus *Sabatia* is represented by some of the most beautiful plants of our flora, members of a genus which finds its greatest development on the coastal plain southward. The writer's propensity for northern exploration had taken him for many summers to regions beyond the range of the genus and it was not until the summer of 1913 that he first saw any of the plants growing: the beautiful slender *S. campanulata* (L.) Torr. or *S. gracilis* (Michx.) Salisb. and the splendid large-flowered plant which in Massachusetts has always passed as *S. chloroides* (Michx.) Pursh or recently as *S. dodecandra* (L.) BSP.

The material of *S. campanulata* collected by the writer on peaty and sandy pond-shores at Barnstable on Cape Cod is quite like the Nantucket plant and specimens collected by others (Williams, Greenman, Sinnott, Faxon) at Barnstable. This plant has for some reason been considered as possibly *S. stellaris* Pursh or as transitional to *S. stellaris* and it was mentioned by Gray in the *Synoptical Flora* as "an ambiguous form." This confusion of the two species arose presumably through over-emphasis on the length of the calyx-lobes and the style-branches and the breadth of the leaves, characters which, as well pointed out by Bicknell,[1] "are unstable in a very marked degree." Mr. Bicknell, however, notes two characters which the writer has independently observed as sound, and the words of the former may be

[1] Bicknell, Bull. Torr. Bot. Cl. xlii. 31 (1915).

appropriately quoted: "Much less so [unstable] are two other characters which, indeed, seem to be almost always sharply distinctive although they have been little emphasized in descriptions. In *S. stellaris* the main leaves, broadest at or above the middle, are distinctly narrowed to the base and the usually acute apex, and the entire plant, unless carefully pressed, readily turns black in drying. *Sabbatia campanulata*, on the contrary, shows little or no discoloration on the herbarium sheet, and the commonly obtuse leaves, linear, linear-oblong, oval or, low on the stem, actually ovate, are broadly sessile or subclasping."

Besides the excellent distinctive characters pointed out by Bicknell there are some others which seem equally important. *S. stellaris* is a plant of saline or brackish marshes and all the specimens examined by the writer from throughout the range, from Massachusetts to eastern Mexico, are annual (or possibly biennial). *S. campanulata*, on the other hand, is at least in Massachusetts a plant of fresh sandy pond-shores or sphagnous bogs, and such labels from the southern states as indicate habitats read: "low, grassy pine barrens and meadows," "damp pine barrens," etc., indicating that the New England habitat of the plant is not unique. Furthermore, all the material of *S. campanulata* which has been carefully collected shows it to be a slightly caespitose perennial with a short subligneous rhizome. The majority of specimens, merely picked or pulled, have no roots but seem to have been broken from a crown. One other character, not so constant, but fairly reliable, is in the bracting of the lateral peduncles. In well developed *S. stellaris* all the peduncles are naked; in well developed *S. campanulata* the lateral peduncles usually bear 1 or 2 median bracts.

As already emphasized *Sabatia campanulata* is a plant of the fresh sandy or peaty shores and marshes. In New England it is very local, seen by the writer only from three regions of Massachusetts: Nantucket Island; the borders of Mary Dunn's Ponds in Barnstable on Cape Cod; and a single station, Pembroke in Plymouth County, where it was collected on September 10, 1884, by W. L. Foster. It was reported by the late Alfred W. Hosmer [1] from a single station in Concord, Massachusetts, but the writer has not seen Mr. Hosmer's material. Its presence as an indigenous plant in Concord is open to some question owing to the transplanting activities of the late Minot Pratt, but the occurrence in Concord or adjacent towns of such

[1] Rhodora, i. 224 (1899).

characteristic coastal plain species as *Sparganium lucidum, Sagittaria teres, Scirpus Longii,* and *Utricularia resupinata,* lends weight to the possibility that the Sabatia is also indigenous.

Sabatia stellaris, the halophytic annual, is little known in New England east of the western shores of Narragansett Bay. It is on the marshes of Martha's Vineyard and locally at Dartmouth, Massachusetts. The writer has seen no material from east of Buzzard's Bay, but there is a report of the plant at Amesbury and Salisbury at the mouth of the Merrimac,[1] and an old record of it at York, Maine.[2] The latter record is unsupported by specimens though there may originally have been material; but Mr. Sears's record of the plant from Amesbury and Salisbury was based on a single specimen now preserved in the herbarium of the Peabody Academy of Science. Through the kindness of Professor A. P. Morse the writer has examined this plant which was found on September 22, 1885, by Mr. Eben True whose communication states that he found but a single plant in a hay field. The specimen is not *S. stellaris* but very characteristic *S. angularis* (L.) Pursh; and its occurrence as a single individual in a planted field indicates that it was only a casual adventive. In his note Mr. Sears refers to *S. stellaris* as found at Pembroke, Massachusetts; but the plant upon which the Pembroke record was based is Mr. Foster's specimen of *S. campanulata* above referred to.

Besides *S. angularis,* just referred to as casually adventive in New England, the related *S. campestris* Nutt. has occasionally been found as a casual in fields and waste places, but it has not, apparently, become established in New England.

The other two species of New England are the larger-flowered plants which generally pass as *Sabatia dodecandra* (L.) BSP. or *S. chloroides* (Michx.) Pursh. *S. dodecandra* was based on *Chironia dodecandra* L. Sp. Pl. i. 190 (1753) which in turn went back to "*Gentiana floribus duodecim-petalis,*" etc. of Gronovius, Virg. 29 (1739). The latter, based upon Clayton's no. 120 from Virginia was described as having the corolla-lobes "lanceolate" and Mr. S. F. Blake, who has examined the specimen, reports the corolla-lobes to be only 5 mm. wide. Later, in the Systema, ed. 12, 267 (1767), Linnaeus transferred his *Chironia dodecandra,* without additional characterization, to the Old World genus *Chlora;* and in 1803 Michaux described from New York and

[1] J. H. Sears, Rhodora, x. 43 (1908).
[2] Goodale, Proc. Portl. Soc. Nat. Hist. i. 60 (1862).

New Jersey as *Chironia chloroides* a plant with "floribus 7–13-partitis" and corolla-lobes "oblong," but with *Chlora dodecandra* L. cited as a synonym, the name presumably changed on account of the lack of precision in the Linnean specific name.

This species, *Sabatia dodecandra*, occurs in coastal marshes from Long Island southward, and judging by herbarium labels and local records it is commonly a plant of saline or brackish marshes. Thus Torrey, who gives a beautiful plate of the plant, ascribes it to "Brackish bog meadows on the Island of New-York, and on Long Island. August;" [1] Taylor, writing of the region from Connecticut to southern New Jersey, says: "In tidal marshes throughout the range; so far not reported inland, nor up the tidal rivers, except in Cape May" [2]; and Stone, writing of southern New Jersey, says: "Frequent on the brackish meadows from the Hackensack marshes south. In the Cape May peninsula it occurs also in fresh marshes over a mile from the coast. . . . *Fl.*—Late July to late August." [3] This plant, usually of brackish marshes, is apparently a perennial (but herbarium specimens very inadequately display the base) and it ranges from 0.8–6 dm. in height; its leaves are nearly uniform up to the inflorescence, oblong to oblong-lanceolate, blunt or acutish; the calyx-lobes are herbaceous or foliaceous, 3–5-nerved, 6–17 mm. long, 1–3 mm. broad, and the calyx-tube is somewhat nerved or corrugated; the corolla-lobes are narrowly oblong-spatulate to oblanceolate, acutish or obtuse, 1.5–2.5 cm. long, 4–9 mm. wide (in dried specimens), with the margins not overlapping; the yellow spot at the base of each segment is elongate, slightly 3-lobed at summit or subentire, and 0.7–2.3 mm. broad.

Whether or not *Sabatia dodecandra* actually occurs in New England is at present an open question. Three stations are recorded in Connecticut: "Rare. Marshes near the coast: Old Lyme (F. H. Dart), Saybrook (Berzelius Catalogue), Guilford (Miss K. Dudley)." [4] Of the Lyme station Dr. C. B. Graves writes, that it was found by Dr. Dart "a good many years ago." Dr. Graves has no material and the colony is now extinct. The Saybrook station was reported in the Berzelius Catalogue, but Mr. A. F. Hill has kindly sent me the entire representation of the species from the Eaton Herbarium and the

[1] Torr. Fl. N. Y. ii. 114, t. 84 (1843).
[2] Taylor, Fl. Vic. N. Y. 504 (1915).
[3] Stone, Pl. So. N. J. 640 (1912).
[4] Graves et al., Cat. Fl. Pl. and Ferns Ct. 319 (1910).

Saybrook station is unrepresented. Similarly, recent collections from Guilford do not show any large-flowered Sabatia there. The plant may now be extinct in Connecticut and until actual specimens can be examined we cannot tell whether the records rest upon true *S. dodecandra* (which is probable) or upon the commoner New England representative of it.

In southeastern Massachusetts no large-flowered Sabatia is known to the writer in brackish marshes, although *S. dodecandra* is to be sought in the Buzzard's Bay region. In Norfolk, Plymouth, Bristol and Barnstable Counties a large Sabatia, which has been passing as *S. dodecandra*, is common and so invariably a plant of damp sandy or peaty margins of fresh ponds or of acid sphagnous bogs, that the Massachusetts botanist, supposing his plant to be *S. dodecandra*, is naturally impressed by Dr. Stone's obvious surprise at finding on the Cape May peninsula *S. dodecandra* "in fresh marshes over a mile from the coast." The Massachusetts plant is rarely if ever found on the actual coast; at least all the herbarium-labels indicate fresh habitats and a majority of the stations are from five to ten miles from the nearest salt water. In many morphological characters the plant of the fresh pond-shores of Massachusetts (and likewise of southern Rhode Island) departs from the somewhat halophytic *S. dodecandra*. The Massachusetts plant is freely stoloniferous, even at the beginning of the flowering season carefully collected specimens exhibiting elongate stolons with well-developed rosettes of acuminate leaves; the plant is taller (2.5–8 dm. high); the basal leaves are oblanceolate and acuminate, distinctly longer than the firm lance-acuminate subulate-tipped cauline ones; the calyx-lobes are firm and linear-subulate, not foliaceous, with slightly hyaline margin, very obscurely 1–3 nerved, 5–15 mm. long, 0.5–1.5 mm. broad, and the calyx-tube nerveless; the corolla-lobes are cuneate-obovate, rounded or emarginate at summit, 1.5–3 cm. long, 6–15 mm. broad, with the margins commonly meeting or overlapping, so that the expanded flower suggests the head of a single *Dahlia* or *Cosmos*. The yellow spot at the base of each lobe is much broader than in *S. dodecandra* (2.5–5 mm. broad) and commonly has 3 long pointed lobes, so that the complete brown-bordered yellow central star of the flower has 21–36 rays. This plant of the Massachusetts pond margins begins flowering in June — some weeks earlier than *S. dodecandra*, apparently,— and is in its prime through July, although belated or small secondary flowers may be found through

the autumn, especially on plants which have been broken off by the omnivorous flower-picker.

In short, the plant of fresh pond-shores of southeastern Massachusetts and southern Rhode Island is quite distinct from the often halophytic *S. dodecandra*. Its nearest affinity seems to be rather with the elegant *S. decandra* (Walt.) Harper which occurs about pine-barren ponds of Georgia, Florida and Alabama and which has a similar calyx and the round-tipped corolla-lobes of the Massachusetts plant; but in *S. decandra* the corolla-lobes are more spatulately narrowed to base and with a comparatively slender yellow spot, the calyx-lobes are much longer, and the plant is nonstoloniferous (apparently biennial), with mostly round-tipped basal leaves. The chief diagnostic characters of these three species are brought out in Plate 121, kindly prepared by Mr. F. Schuyler Mathews.

So far as the writer can determine, the plant of Massachusetts and Rhode Island has not heretofore been distinguished and it is a great pleasure to be able to associate with this splendid species the name of the scholarly New England botanist and sympathetic friend of all botanists, Dr. George Golding Kennedy. The New England plant may, therefore, be called

Sabatia **Kennedyana**, n. sp. Perennis valde stolonifera, stolonibus flagelliformibus apice rosulatis; caule florifero solitario 2.5–8 dm. alto; foliis basilariis anguste oblanceolatis acuminatis 3–8 cm. longis 4–15 mm. latis; foliis caulinis 5–11-jugis (rarissime ternatis) firmis lanceolato-acuminatis basi sessilibus vel subamplexicaulibus apice mucronatis; floribus 1–16 longe pedunculatis apud examplara nunquam mutilata 3–7 cm. latis; tubo calycis campanulato-hemisphaerico enervato, lobis calycis 7–12 lineari-subulatis nec foliaceis obscure 1–3-nervatis 5–15 mm. longis 0.5–1.5 mm. latis margine hyalinis; lobis corollae roseis 7–12 cuneato-obovatis apice rotundatis vel emarginatis 1.5–3 cm. longis 6–15 mm. latis, macula basilari lutea brunneo-marginata late oblonga vel cuneato-obovata subtruncata 3-lobata 5–9 mm. longa 2.5–5 mm. lata; antheris 7–12; stylo stigmatibusque subaequantibus; capsula breviter ellipsoidea 6–10 mm. longa apice rotundata vel emarginata, valvulis hyalino-marginatis — Sandy or peaty margins of fresh ponds or in sphagnous bogs, Massachusetts and Rhode Island. Massachusetts: Great Pond, South Weymouth, September 11, 1903, *Lillian Woodbury:* border of pond, Scituate, September 20, 1914, *F. F. Forbes;* beach of Snake Pond, Kingston, October 25, 1914, *Fernald;* Plymouth, *Oakes et al.;* sandy shore of Clear Pond, Plymouth, August 30, 1913, *Fernald, Hunnewell & Long,* no. 10,219; damp sandy beach of Boot Pond, Plymouth, September 6, 1913, *Fernald, Hunnewell & Long,* no. 10,220; sandy shore of Cooper's Pond, Carver, August 30, 1913, *Fernald, Hunnewell & Long,* no.

10,218; Nemasket River near Lake Assawampsett, Lakeville, August 10, 1887, *C. H. Morss;* damp sandy shore of Loon Pond, Lakeville, August 26, 1913, *Fernald & Long*, no. 10,216; sandy shore of Clear Pond, Lakeville, August 26, 1913, *Fernald & Long*, no. 10,217; Taunton, 1883, *Mrs. H. D. Wilmarth;* wet, sandy border of North Watuppa Lake, Fall River, August 15, 1913, *S. N. F. Sanford* (plant with whorls of 3 and 4 leaves); wet sandy border of cranberry-bog, Dartmouth, August 24, 1908, *S. N. F. Sanford;* borders of ponds, Centreville, Barnstable, July 16, 1899, July 20, 1900, *Clara Imogene Cheney;* shore of Wequawket Pond, Centreville, Barnstable, July 4, 1896, *E. F. Williams* (TYPE in Gray Herb.); Nine Mile Pond, Barnstable, September 4, 1898, *Greenman, Williams;* damp sandy beach of Dennis Pond, Yarmouth, September 19, 1913, *Fernald & Long*, no. 10,222; shore of Long Pond, Yarmouth, August 19, 1907, *E. W. Sinnott;* Brewster, August 31, 1914, *F. S. Collins*, no. 3,194; margin of bog, Harwich, July 6, 1912, *F. S. Collins*, no. 1,497; damp sandy and peaty margin of Emery Pond, Chatham, September 9, 1913, *Fernald & Long*, no. 10,221; shallow water, Crystal Lake, Orleans, August 22, 1901, *H. P. Wilson;* shore of Meetinghouse Pond, Eastham, July 28, 1907, *F. S. Collins*, no. 357. RHODE ISLAND: shore of Gorton's Pond, Apponaug, August 18, 1886, *J. F. Collins;* shore of Worden's Pond, South Kingston, *Thurber et al.*

Forma **candida**, n. f., lobis corollae albis, macula basilari nec brunneo-marginata.—At scattered stations throughout the range. TYPE: Weymouth, Massachusetts, August 8, 1905, *Miss Underwood* (Gray Herb.).

Of the Weymouth station Mrs. Clark wrote in RHODORA, vii. 38 (1905): "there are hundreds of the plants none of which show the slightest tinge of pink in the flowers. No typical pink flowers can be found nearer than at a pond in South Weymouth, fully three miles away, where . . . . all . . . . have borne pink flowers. The white form shows no constant differences from the type except in color. The petals are not greenish nor creamy, but a very pure white, and the brown markings usually found at the 'eye' of the pink flowers are wanting in the white form the centre of which is a delicate green or yellow color. The plants seem larger and more vigorous than those of the type . . . . On two sides of the large pond the white flowers are massed so closely together that when seen from the street they bring to mind a field of daisies in early summer."

The very striking albino of *S. campanulata* seems not to have had a convenient designation and it may be called

S. CAMPANULATA (L.) Torr., forma **albina**, n. f., lobis corollae albis.—Occasional throughout the range of the species. TYPE: peaty margin of Small Pond, Barnstable, Massachusetts, July 31, 1913, *Fernald*, no. 10,224 (Herb. New Engl. Bot. Cl.).

The white-flowered form of *S. stellaris* is forma *albiflora* Britton, Bull. Torr. Bot. Cl. xvii. 125 (1890).

Gray Herbarium.

Explanation of Plate 121.

(All figures × 1).

Sabatia Kennedyana. 1 and 2. Base and portion of inflorescence of the type specimen from Centerville, Massachusetts, *E. F. Williams.* 3. Fruit from Loon Pond, Lakeville, Massachusetts, *Fernald & Long*, no. 10,216.

S. dodecandra. 4 and 5. Flower and fruit from Hackensack Marshes, New Jersey, *D. C. Eaton.*

S. decandra. 6, 7 and 8. Basal rosette, flower and fruit from Sumter Co., Georgia, *Harper*, no. 461.

NOMENCLATORIAL TRANSFERS.

L. H. Bailey.

In the compiling of the Standard Cyclopedia of Horticulture, it is the intention to avoid the making of new combinations in the names of plants. Unavoidably, a relatively very small number of new combinations have arisen, mostly of horticultural varieties and species of minor importance; it is the purpose to make a separate dated list of these when the work is completed. In Vols. V and VI, however, it has been necessary to make an unusual number and some of them affect North American species; and it has seemed best to publish some of them in advance.

In some of this work I have had the aid of F. Tracy Hubbard, and a number of the combinations are his, as indicated in every case.

It has been the desire, in the compilation of the Cyclopedia, to accept new generic limitations with caution. The temper of the present time is to find differences, as opposed to the tendency of the immediately preceding workers to find agreements. The analytic intention is the mark of systematic work in this generation as the synthetic intention was the mark of the past generation. There is reason to expect a return from the method of disunion to the method of relationships; and as a work designed for the use of horticulturists,

who cannot be skilled in bibliography and pedantry, should be conservative, I have thought it best, so far as possible, to avoid unnecessary and fantastic subdivisions.

Polyscias.

The cultivated Aralias, particularly those of the greenhouses and conservatories, are much confused, due to imperfect descriptions and to the fact that the plants rarely bloom, as well as to the fact that some of them are dimorphous in foliage and also very variable. The florists' Aralias with digitate leaves are apparently Dizygothecas; those with pinnate leaves may be referred, pending completer study, to Polyscias, as follows:

Polyscias Guilfoylei (Bull), comb. nov. *Aralia Guilfoylei* Bull, Cat. 1873, and Hort. *Nothopanax Guilfoylei* (Bull) Merrill, Philip. Journ. Sci. (Bot.), vii. 242 (1912).

Polyscias Guilfoylei (Bull) Bailey, var. **laciniata** (Hort.), comb. nov. *Panax laciniatum* Hort.

Polyscias Guilfoylei (Bull) Bailey, var. **monstrosa** (Hort.), comb. nov. *Aralia monstrosa* Hort. *Panax monstrosum* Hort.

Polyscias Guilfoylei (Bull) Bailey, var. **Victoriae** (Rod.), comb. nov. *Panax Victoriae* Rod., Illustr. Hortic. xxxi. 75, t. 521 (1884). *Aralia Victoriae* Hort. *Nothopanax fruticosum* (L.) Miq., var. *Victoriae* Merrill, Fl. Manila, 358 (1912).

Polyscias Balfouriana (Hort. Sander), comb. nov. *Aralia Balfouriana* Hort. Sander. *Panax Balfouri* Hort. Sander.

Polyscias filicifolia (Moore), comb. nov. *Aralia filicifolia* Ch. Moore, Illustr. Hortic. xxiii. 72, t. 240 (1876). *Panax filicifolium* Hort.

Polyscias fruticosa (L.) Harms, var. **plumata** (Hort.), comb. nov. *Panax plumatum* Hort. *Nothopanax fruticosum* (L.) Miq., var. *plumatum* (Hort.) Merrill, Fl. Manila, 358 (1912).

Pyrus.

It has seemed best, for the purpose of the Cyclopedia, to retain Malus in Pyrus, and this results in a number of important transfers. The new names of native and oriental crab-apples have been made

mostly under Malus. I have been unable to foresee any real gain to accrue from the separation, at least in a horticultural work.

Pyrus coronaria L., var. **elongata** (Rehd.), comb. nov. *Malus fragrans* Rehd., var. *elongata* Rehd., in Sarg. Trees and Shrubs, ii. 229 (1913). *Malus coronaria* (L.) Mill., var. *elongata* (Rehd.) Rehd., in Mitt. Deutsch. Dendr. Ges., 1914. 261 (1914).

Pyrus glabrata (Rehd.), comb. nov. *Malus glabrata* Rehd., in Sarg. Trees and Shrubs, ii. 225, t. 188 (1913).

Pyrus glaucescens (Rehd.), comb. nov. *Malus glaucescens* Rehd., l. c. ii. 139, t. 157 (1911).

Pyrus lancifolia (Rehd.), comb. nov. *Malus lancifolia* Rehd., l. c. ii. 141, t. 158 (1911).

Pyrus platycarpa (Rehd.), comb. nov. *Malus platycarpa* Rehd., l. c. ii. 227, t. 189 (1913).

Pyrus platycarpa (Rehd.) Bailey, var. **Hoopesii** (Rehd.), comb. nov. *Malus platycarpa* Rehd., var. *Hoopesii* Rehd., l. c. ii. 227 (1913).

Pyrus angustifolia Ait., var. **puberula** (Rehd.), comb. nov. *Malus coronaria* Mill., var. *puberula* Rehd., l. c. ii. 229 (1913). *Malus angustifolia* Mill., var. *puberula* (Rehd.) Rehd., in Mitt. Deutsch. Dendr. Ges., 1914. 261 (1914).

Pyrus bracteata (Rehd.), comb. nov. *Malus bracteata* Rehd., in Sarg. Trees and Shrubs, ii. 230 (1913).

Pyrus ioensis (Wood) Bailey, var. **Bushii** (Rehd.), comb. nov. *Malus ioensis* (Wood) Britt., var. *Bushii* Rehd., l. c. ii. 232 (1913).

Pyrus ioensis (Wood) Bailey, var. **spinosa** (Rehd.), comb. nov. *Malus ioensis* (Wood) Britt., var. *spinosa* Rehd., l. c. ii. 231 (1913).

Pyrus ioensis (Wood) Bailey, var. **texana** (Rehd.), comb. nov. *Malus ioensis* (Wood) Britt., var. *texana* Rehd., l. c. ii. 142 (1911).

Pyrus ioensis (Wood) Bailey, var. **Palmeri** (Rehd.), comb. nov. *Malus ioensis* (Wood) Britt., var. *Palmeri* Rehd., l. c. ii. 142 (1911).

Pyrus ioensis (Wood) Bailey, var. **creniserrata** (Rehd.), comb. nov. *Malus ioensis* (Wood) Britt., var. *creniserrata* Rehd., l. c. ii. 231 (1913).

Pyrus atropurpurea (Britt.), comb. nov. *Aronia atropurpurea* Britt., Man. Fl. N. States and Can. 517 (1901). *Pyrus arbutifolia* L. f., var. *atropurpurea* Robins., in Rhodora, x. 33 (1908).

Pyrus Halliana (Koehne) Voss, var. **Parkmanii** (Temple), comb. nov. *Pyrus Malus* L., var. *Parkmanii* Temple, in Gard. Mo., xxix. 35 (1887). *Malus floribunda* Sieb., var. *Parkmannii* (Temple) Koidz.,

in Tokyo Bot. Mag., xxv. 76 (1911). *Malus Halliana* Koehne, forma *Parkmanii* (Temple) Rehd., in Sarg., Pl. Wils., ii. 286 (1915).

Pyrus prunifolia Willd., var. **Rinki** (Rehd.), comb. nov. *Malus prunifolia* (Willd.) Borkh., var. *Rinki* Rehd., in Sarg., Pl. Wils., ii. 279 (1915).

Pyrus theifera (Rehd.), comb. nov. *Malus theifera* Rehd., in Sarg., l. c. ii. 283 (1915).

Pyrus theifera (Rehd.) Bailey, var. **rosea** (Rehd.), comb. nov. *Malus theifera* Rehd., var. *rosea* Rehd., l. c. ii. 284 (1915).

Pyrus transitoria Batalin, var. **toringoides** (Rehd.), comb. nov. *Malus transitoria* (Batalin) Schneid., var. *toringoides* Rehd., l. c. ii. 286 (1915).

Pyrus micromalus (Makino), comb. nov. *Malus micromalus* Makino, in Tokyo Bot. Mag., xxii. 69 (1908).

Pyrus Sieboldii Regel, var. **arborescens** (Rehd.), comb. nov. *Malus Sieboldii* (Regel) Rehd., var. *arborescens* Rehd., in Sarg., Pl. Wils., ii. 294 (1915).

Pyrus Sieboldii Regel, var. **calocarpa** (Rehd.), comb. nov. *Malus Sieboldii* (Regel) Rehd., var. *calocarpa* Rehd., l. c. ii. 294 (1915).

Pyrus pulcherrima Aschers. & Graebn., var. **Scheideckeri** (Spaeth), comb. nov. *Pyrus Scheideckeri* Spaeth, Cat. 1888. *Malus Scheideckeri* (Spaeth) Zabel, in Beissn., Schelle & Zabel, Handb. Laubh. Benenn. 188 (1903).

Pyrus pulcherrima Aschers. & Graebn., var. **Arnoldiana** (Rehd.), comb. nov. *Malus floribunda* Sieb., var. *Arnoldiana* Rehd., Möller's Deutsch. Gärtn.-Zeit. xxiv. 27 (1909).

Other Genera.

Sabal exul (Cook), comb. nov. *Inodes exul* Cook, U. S. Dept. Agric., Bur. Pl. Ind., Circ. 113, p. 14 (1913).

Roripa indica (L.), comb. nov. *Sisymbrium indicum* L., Mant. 93 (1767). *Nasturtium indicum* (L.) DC., Syst. ii. 199 (1821).

Prunus salicina Lindl., var. **pubipes** (Koehne), comb. nov. *Prunus triflora* Roxbg., nomen nudum, and Hort., var. *pubipes* Koehne, in Sarg. Pl. Wils. i. 280 (1912).

Prunus domestica L., var. **insititia** (L.), comb. nov. *Prunus insititia* L., Cent. Pl., i. 12 (1755). *P. domestica* L., subsp. *insititia* (L.) Schneider, Ill. Handb. Laubh. i. 630 (1906).

Passiflora Parritae (Masters), comb. nov. *Tacsonia Parritae* Masters, in Gard. Chron. Ser. II. xvii. 218 (1882).

Passiflora Jamesonii (Masters), comb. nov. *Tacsonia Jamesonii* Masters, in Martius, Fl. Bras., xiii. pt. 1. 537 (1872).

Passiflora mollissima (HBK), comb. nov. *Tacsonia mollissima* HBK., Nov. Gen. et Sp., ii. 144 (1817).

Paeonia suffruticosa Andrews, var. **rubro-plena** (Hort.), comb. nov. *Paeonia Moutan* Sims, var. *rubro-plena* Hort.

Paeonia suffruticosa Andrews, var. **roseo-superba** (Hort.), comb. nov. *Paeonia Moutan* Sims, var. *roseo-superba* Hort.

Paeonia suffruticosa Andrews, var. **vittata** (VanHoutte), comb. nov. *Paeonia Moutan* Sims, var. *vittata* VanHoutte, Fl. de Serr., vii. t. 747. (1852).

Paeonia suffruticosa Andrews, var. **papaveracea** (Andrews), comb. nov. *Paeonia papaveracea* Andrews, Bot. Rep., vii. t. 463. *Paeonia Moutan* Sims, var. *papaveracea* K. C. Davis, in Bailey, Cyclo. Amer. Hort., iii. 1190 (1901).

Paeonia suffruticosa Andrews, var. **Banksii** (Hort.), comb. nov. *Paeonia Moutan* Sims, var. *Banksii* Hort.

Paeonia suffruticosa Andrews, var. **Humei** (Hort.), comb. nov. *Paeonia Moutan* Sims, var. *Humei* Hort.

Paeonia suffruticosa Andrews, var. **rosea** (Lodd.), comb. nov. *Paeonia Moutan* Sims, var. *rosea* Lodd. Bot. Cab., xi. t. 1035 (1825).

Statice and Limonium.

Linnaeus in Species Plantarum united the Statice and Limonium of Tournefort. According to the International Rules, Section 6, Article 45, as pointed out by Mr. Blake in Rhodora xviii. 55 (1916), when the genus was divided the name Statice should be retained in the Tournefort sense as that is the origin of the name; or in other words Statice is properly applied to the capitate species, later segregated by Willdenow as Armeria, and the other species with an open inflorescence should retake the Tournefort name of Limonium, which is the treatment adopted by Miller in Gardener's Dictionary, edition 8. This reinstatement of the Miller treatment makes necessary the following new combinations:

Statice Armeria L., var. **alba** (Hort.) Hubb., comb. nov.

Armeria vulgaris Willd., var. *alba* Hort. and Bailey, Stand. Cycl. Hort. i. 395 (1914).

Statice Armeria L., var. **grandiflora** (Hort.) Hubb., comb. nov. *Armeria vulgaris* Willd., var. *grandiflora* Hort. ex Bailey, l. c. i. 395 (1914).

Statice Armeria L., var. **Laucheana** (Voss) Hubb., comb. nov. *Armeria maritima* Willd., forma *Laucheana* Voss., Vilm. Blumengärtn., ed. 3, i. 617 (1896). *A. vulgaris* Willd., var. *Laucheana* Voss. ex Bailey, l. c. i. 395 (1914).

Statice Armeria L., var. **purpurea** (Hort.) Hubb., comb. nov. *Armeria vulgaris* Willd., var. *purpurea* Hort. ex Bailey, l. c. i. 395 (1914).

Statice Armeria L., var. **rubra** (Hort.) Hubb., comb. nov. *Armeria vulgaris* Willd., var. *rubra* Hort. ex Bailey, l. c. i. 395 (1914).

Statice Armeria L., var. **splendens** (Hort.) Hubb., comb. nov. *Armeria vulgaris* Willd., var. *splendens* Hort. ex Bailey, l. c. i. 395 (1914).

Statice Armeria L., var. **variegata** (Hort.) Hubb., comb. nov. *Armeria maritima* Willd., var. *variegata* Hort.

Statice juncea (Girard) Hubb., comb. nov. *Armeria juncea* Girard, in Ann. Sci. Nat. Ser. III. ii. 324 (1844).

Statice leucocephala (Salzm.) Hubb., comb. nov. *Armeria leucocephala* Salzm. ex Koch, in Flora vi. 712 (1823).

Statice majellensis (Boiss.) Hubb., comb. nov. *Armeria majellensis* Boiss., in DC. Prodr. xii. 685 (1848).

Statice mauritanica (Wallr.) Hubb., comb. nov. *Armeria mauritanica* Wallr., Beitr. i. 217 (1844). *A. cephalotes* Hook., not Schousb., Bot. Mag. t. 4128 (1844).

Statice montana Mill., var. **alba** (Hort.) Hubb., comb. nov. *Armeria alpina* Willd., var. *alba* Hort.

Statice plantaginea All., var. **alba** (Hort.) Hubb., comb. nov. *Armeria plantaginea* Willd., var. *alba* Hort.

Statice plantaginea All., var. **gigantea** (Hort.) Hubb., comb. nov. *Armeria plantaginea* Willd., var. *gigantea* Hort.

Statice plantaginea All., var. **grandiflora** (Hort.) Hubb., comb. nov. *Armeria plantaginea* Willd., var. *grandiflora* Hort.

Statice plantaginea All., var. **leucantha** (Boiss.) Hubb., comb. nov. *Armeria plantaginea* Willd., var. *leucantha* Boiss., in DC. Prodr. xii. 683 (1848).

Statice plantaginea All., var. **rosea** (Hort.) Hubb., comb. nov. *Armeria plantaginea* Willd., var. *rosea* Hort.

Statice plantaginea All., var. **rubra** (Hort.) Hubb., comb. nov. *Armeria plantaginea* Willd., var. *rubra* Hort.

Statice plantaginea All., var. **splendens** (Hort.) Hubb., comb. nov. *Armeria plantaginea* Willd., var. *splendens* Hort.

Statice pseudoarmeria Murr., var. **alba** (Hort.) Hubb., comb. nov. *Armeria Cephalotes* Hoffm. & Link, var. *alba* Hort.

Statice pseudoarmeria Murr., var. **grandiflora** (Hort.) Hubb., comb. nov. *Armeria Cephalotes* Hoffm. & Link, var. *grandiflora* Hort.

Statice pseudoarmeria Murr., var. **rubra** (Hort.) Hubb., comb. nov. *Armeria Cephalotes* Hoffm. & Link, var. *rubra* Hort.

Statice pseudoarmeria Murr., var. **splendens** (Hort.) Hubb., comb. nov. *Armeria Cephalotes* Hoffm. & Link, var. *splendens* Hort.

Statice Welwitschii (Boiss.) Hubb., comb. nov. *Armeria Welwitschii* Boiss., in DC. Prodr. xii. 676 (1848).

Limonium collinum (Griseb.) Hubb., comb. nov. *Statice collina* Griseb., Spicil. Fl. Rumel ii. 300 (1844). *S. Besseriana* Friv., not Schult., ex Griseb., l. c. ii. 300 (1844). *Goniolimon collinum* (Griseb.) Boiss., in DC. Prodr. xii. 633 (1848).

Limonium eximium (Schrenk) Kuntze, var. **album** (Hort.) Hubb., comb. nov. *Statice eximia* Schrenk, var. *alba* Hort. *S. eximia* Schrenk, var. *flore-alba* Hort.

Limonium eximium (Schrenk) Kuntze, var. **superbum** (Hort.) Hubb., comb. nov. *Statice eximia* Schrenk, var. *superba* Hort.

Limonium imbricatum (Webb) Hubb., comb. nov. *Statice imbricata* Webb ex Girard, in Ann. Sci. Nat. Ser. III. ii. 330 (1844).

Limonium latifolium (Sm.) Kuntze, var. **album** (Hort.) Hubb., comb. nov. *Statice latifolia* Sm., var. *albá* Hort.

Limonium latifolium (Sm.) Kuntze, var. **roseum** (Hort.) Hubb., comb. nov. *Statice latifolia* Sm., var. *rosea* Hort.

Limonium Perezii (Stapf) Hubb., comb. nov. *Statice Perezii* Stapf, in Ann. Bot. xxii. 116 (1908).

Limonium profusum (Hort.) Hubb., comb. nov. *Statice profusa* Hort., cf. Garden xxxiii. 457 (1885). *S. puberulum* Webb × S. *macrophylla* Brouss. ex Spreng.

Limonium purpuratum (L.) Hubb., comb. nov. *Statice purpurata* L., Mant. 59 (1767).

Limonium purpuratum (L.) Hubb., var. **longifolium** (Thunb.)

Hubb., comb. nov. *Statice longifolia* Thunb., Prodr. Pl. Cap. 54. (1794). *S. purpurata* L., var. *longifolia* (Thunb.) Boiss., in DC. Prodr. xii. 667 (1848).

Limonium sinuatum (L.) Mill., var. **candidissimum** (Hort.) Hubb., comb. nov. *Statice sinuata* L. var. *candidissima* Hort.

Limonium superbum (Regel) Hubb., comb. nov. *Statice superba* Regel, in Gartenfl. xxxiii. 234 (1884). *S. Suworowii* Regel × *S. leptostachya* Boiss.

Limonium superbum (Regel) Hubb., var. **flore-albo** (Benary) Hubb., comb. nov. *Statice superba* Regel, var. *flore-albo* Benary, cf. Gartenfl. xlv. 635 (1896).

Limonium Suworowii (Regel) Kuntze, var. **album** (Hort.) Hubb., comb. nov. *Statice Suworowii* Regel, var. **alba** Hort., cf. Gard. Chron. Ser. III. liii. 426 (1913).

Limonium tataricum (L.) Mill., var. **angustifolium** (Boiss.) Hubb., comb. nov. *Goniolimon tataricum* (L.) Boiss., var. *angustifolium* Boiss., in DC. Prodr. xii. 633 (1848). *Statice tatarica* L., var. *angustifolium* Hort. *S. Besseriana* Schult., Syst. vi. 789, in text (1820). *S. incana* Bieb., not L., Fl. Taut. Cauc. i. 251 (1808). *S. incana* Bieb., var. *hybrida* Hort.

Limonium tataricum (L.) Mill., var. **coccineum** (Hort.) Hubb., comb. nov. *Statice incana* Bieb., var. *coccinea* Hort.

Limonium tataricum (L.) Mill., var. **nanum** (Hort.) Hubb., comb. nov. *Statice tatarica* L., var. *nana* Hort. *S. incana* Bieb., var. *hybrida nana* Hort.

Limonium vulgare Mill., var. **album** (Hort.) Hubb., comb. nov. *Statice Limonium* L. var. *alba* Hort.

Limonium vulgare Mill., var. **macrocladum** (Boiss.) Hubb., comb. nov. *Statice Limonium* L., var. *macroclada* Boiss., in DC. Prodr. xii. 645 (1848).

Other Genera.

Berkheya membranifolia (DC.) Hubb., comb. nov. *Stobaea membranifolia* DC., Prodr. vi. 521 (1837).

Berkheya Radula (Harv.) Hubb., comb. nov. *Stobaea Radula* Harv. in Harv. & Sond., Fl. Cap. iii. 491 (1865).

Pseuderanthemum laxiflorum (Gray) Hubb., comb. nov. *Eranthemum laxiflorum* Gray, in Proc. Am. Acad. v. 349 (1862).

Saxifraga diversifolia Wall., var. **foliata** (Engl. & Irmscher) Hubb., comb. nov. *S. diversifolia* Wall., forma *foliata* Engl. & Irmscher, in Notes R. Bot. Gard. Edinb. v. 138 (1912).

Saxifraga moschata Wulf., var. **densa** (Hort.) Hubb., comb. nov. *S. muscoides* Hort., not All. var. *densa* Hort., cf. Irv. & Malb., Saxif. 35 (not dated, about 1911–12). *S. densa* Hort., not Willd.

Saxifraga moschata Wulf., var. **Fergusonii** (Hort.) Hubb., comb. nov. *S. Fergusonii* Hort., cf. Gard. Chron. Ser. III. xxxiii. 340 (1903).

Saxifraga Stracheyi Hook. f. & Thoms., var. **Schmidtii** (Regel) Hubb., comb. nov. *S. Schmidtii* Regel. *Bergenia Schmidtii* Hort. *S. thysanodes* Hort. Haage & Schmidt, not Lindl.

Sedum alboroseum Baker, var. **variegatum** (Mast.) Hubb., comb. nov. *S. erythrostictum* Mast., not Miq., var. *variegatum* Mast., in Gard. Chron. Ser. II. x. 337 (1878). *S. japonicum* Hort., not Sieb., var. *variegatum* Hort. ex Wilh. Mill., in Bailey, Cycl. Am. Hort. iv. 1639 (1902). *S. alboroseum* Baker, var. *foliis variegatis* Regel, in Gartenfl. xxi. 2, t. 709, f. 6 (1872).

Tropaeolum peltophorum Benth., var. **fimbriatum** (Hort.) Hubb., comb. nov. *T. Lobbianum* Veitch, var. *fimbriatum* Hort.

Tropaeolum peltophorum Benth., var. **hederifolium** (Hort.) Hubb., comb. nov. *T. Lobbianum* Veitch, var. *hederifolium* Hort.

Tropaeolum peltophorum Benth., var. **miniatum** (Hort.) Hubb., comb. nov. *T. Lobbianum* Veitch, var. *miniatum* Hort.

Tropaeolum peltophorum Benth., var. **Reginae** (Hort.) Hubb., comb. nov. *T. Lobbianum* Veitch, var. *Reginae* Hort.

NYMPHAEA AND NUPHAR AGAIN.

Henry S. Conard.

It is nearly thirty years since E. L. Greene [1] attacked the validity of the generic names Nymphaea and Nuphar. He "discovered" the fact that Salisbury in 1806 (or 1805) [2] divided into two parts the genus Nymphaea as then understood, giving the name Castalia to the white waterlilies, and retaining Nymphaea for the yellow flowering cow-lilies. It was in 1808 or 1809 that Sir J. E. Smith [3] proposed to retain Nymphaea for the waterlilies, and to call the cow-lilies by their old classic name of Nuphar. Greene, Britten,[4] Lawson [5] and others established the priority of Salisbury's work beyond a possibility of doubt. They also discussed the probable causes for the general acceptance of Smith's generic names, and the neglect of Salisbury's.

For various reasons, however, many botanists have refused to return to Salisbury's generic names. The clearest and strongest argument for the refusal was set forth by Dr. John Briquet in his Prodrome de la Flore Corse (pp. 577–9). In this book, and in a personal letter to the writer, he opposed Salisbury on the basis of Art. 45 of the International Rules of Botanical Nomenclature. This article declares that in dividing a genus, the old name must be retained for that portion containing the largest number of species. Salisbury had acted contrary to this rule. In the course of the argument in the Prodrome, Dr. Briquet further points out that Salisbury's diagnosis of Nymphaea was opposed to the definition of the genus given by Linnaeus in the sixth edition of the Genera Plantarum. In following up the suggestion of Dr. Briquet, facts have come to light, which would seem to settle the controversy conclusively in favor of Smith's nomenclature.

In the fifth edition of the Genera Plantarum (1754), which is taken as the starting point for generic diagnoses (Internat. Rules Art. 19), Nymphaea is defined thus: (p. 227).

Cal. *Perianthium* pentaphyllum s. tetraphyllum, magnum, coloratum, persistens.

[1] Bull. Torr. Bot. Club, **14**: 177; 257; **15**: 84.

[2] König & Sims Ann. of Bot. **2**: 69–76. Salisbury's paper probably appeared in June 1805. The volume was completed in 1806, and is so dated.

[3] Florae Graecae Prodromus, **1**: 360. Exact date of this part uncertain.

[4] Journ. of Bot. Brit. & For. **26**: 6–10.

[5] Trans. Roy. Soc. Canada, Sec. IV. **6**: 97–125.

Cor. *Petala* numerosa (quindecim saepe), calyce minora, germinis lateri insidentia, serie plusquam simplici

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Obs. Calyx & Corolla *quoad numerum & figuram incerta sunt, hinc*

N. lutea *Calyce pentaphyllo, foliolis subrotundis, Petalis minimis.*
N. alba *Calyce tetraphyllo, foliolis ovatis, corollam vix superantibus.*
Nelumbo *Pericarpium turbinatum, truncatum,* etc., etc.

In the description of the other genera in this work, Linnaeus usually did not name any species. In the case of Nymphaea, however, he pointed out in his "Observations," as shown above, that three distinct elements were included in it.

The important differences between these three elements had so impressed Linnaeus in the course of ten years, that he changed the description of the genus in the sixth edition of Genera Plantarum (1764) to read thus: (p. 264).

Cal. *Perianthium* inferum, tetraphyllum, magnum, supra coloratum, persistens.
Cor. *Petala* numerosa (quindecim saepe), germinis lateri insidentia, serie plus quam simplici.

* * * * * * * * * * * *

N. lutea *Calyce pentaphyllo: foliolis subrotundis, Petalis minimis a reliquis differt.*
Nelumbo *Pericarpium turbinatum, truncatum,* etc., etc.

It will be noted that the word *pentaphyllum* is omitted from the description of the calyx, and *calyce minora* is omitted from the description of the corolla. Both of these omitted expressions apply to the *N. lutea* element of the former edition. The description as thus amended applies strictly to the *N. alba* element. This is further emphasized by the words *Cor. germinis lateri insidentia,* referring to the insertion of the petals on the side of the ovary in the white waterlily group. This character does not occur in the cow-lilies, or in the lotus (Nelumbo).

As in the former edition, there was usually no citation of species in the sixth edition of Linnaeus's Genera Plantatum. Here, however, *N. lutea* and *Nelumbo* were named. *N. lutea* was said to "differ" from the others by certain characters. The mention of the two "aberrant" (Briquet, p. 578) elements, and the omission in this edition of the name of the fully described waterlily element, shows that the genus Nymphaea was at this time intended by Linnaeus to

refer to the true waterlilies. He excluded the other two groups, but omitted the coining of a new name for them. Surely this omission cannot invalidate the name of the group which he did accurately describe.

Linnaeus's definition of Nymphaea of the sixth edition of the Genera Plantarum was copied *verbatim* in the various 7th and 8th editions. It was accepted and amplified by Jussieu in his Genera Plantarum (1789). There we read, p. 68,

Nymphaea, T. L. **Nenuphar*. Calix multipartitus laciniis multiplice ordine, exterioribus 4–5 extus viridibus, caeteris interioribus (petala T. L.) coloratis, petaloideis. Stamina numerosa, multiplici ordine germinis lateribus affixa; filamenta exteriora latiora et petaloidea; etc., etc.

Jussieu called all of the perianth a calyx, whose inner members are colored and petaloid. The numerous stamens are attached to the sides of the ovary, and the outer have broad, petaloid filaments. All of these characters apply only to the white waterlily group, and not at all to the cow-lilies or the lotus. If, therefore, any doubt remains as to the meaning of Linnaeus's Nymphaea, no doubt can remain regarding Jussieu's. When we add that Adanson in 1763 [1] had separated the genus Nelumbo from the original Nymphaea of Linnaeus (1753–54), we have the facts as they were when Salisbury wrote.

Salisbury in 1805 completed the segregation of the old genus Nymphaea along lines already pointed out by Linnaeus. But he was entirely wrong in applying Linnaeus's amended name Nymphaea to the part of the genus which Linnaeus had definitely excluded from his mature generic characterization, and in coining the new name Castalia for the group, which both Linnaeus and Jussieu had clearly intended in their descriptions of the genus Nymphaea. A comparison of Salisbury's generic diagnosis with those quoted from Linnaeus and Jussieu will show how he reversed the meaning of Nymphaea. He says (König and Sims Ann. of Bot. **2**: 71, 1806),

NYMPHAEA

Calyx 5–6-phyllus, toro insertus, petaloideus. Nectaria 11–16, toro inserta, lamellaria, dorso mellifera. Filamenta 90–160, toro inserta, sub anthesi a pericarpio elastice dissilientia, etc.

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[1] Fam. Pl. **2**: 76.

CASTALIA

Calyx 4–5-phyllus, marginem tori cingens. Petala 20–30, pericarpio a basi usque ad medium inserta. Filamenta 60–150, pericarpio altius inserta, libera, etc.

The facts which we have presented were evidently known to Sir J. E. Smith. In his Florae Graecae Prodromus (1808–09) he approved of Salisbury's division of the old genus Nymphaea, but he showed disapproval of Salisbury's nomenclature by remarking, "at minus bene Nymphaeam antiquorum veram, nomine, Castalia. . . . distinxit." Also, in Rees's Cyclopedia (Vol. 25, Art. Nymphaea) he noted that the difference between the white- and the yellow-flowered groups of Nymphaea were recognized by Linnaeus. Smith was right, therefore, in retaining Nymphaea L. emend., for the white waterlilies, and restoring the old prelinnean name Nuphar for the cow-lily group. For this latter group had not previously received a valid generic name in post-linnean times.

It would be only a technicality to argue that, according to rules of nomenclature accepted in some places, the Linnean genera are not valid because no species are cited as belonging to them. A comparison of the texts of the fifth and sixth editions of the Genera Plantarum shows that *N. alba* is the Nymphaea of ed. 6. And it is generally accepted that ed. 5 is referred to the Species Plantarum of 1753 (Internat. Rules, Art. 37, 38). Furthermore, the International Rules admit a genus as valid if adequately described, regardless of whether any species are mentioned. Thus Nymphaea stands for the white waterlilies, on the authority of Linnaeus 1764.

We must conclude therefore that the valid genera are:

Nymphaea Linn. 1764 = { Nymphaea Linn. 1754 ('53) in part. / Castalia Salisb. 1805–06.

Nuphar Sm. 1808–09 = { Nymphaea Linn. 1754 ('53) in part. / Nymphaea Salisb. 1805, *not* Linn. 1764.

Nelumbo Adans. 1763 = { Nymphaea Linn. 1754 ('53) in part. / Nelumbium Juss. 1789.

Gray Herbarium of Harvard University.

REPORTS ON THE FLORA OF THE BOSTON DISTRICT,— XXIII.

RANUNCULACEAE.

ACTAEA.

A. alba (L.) Mill. Woods, frequent, but not reported south of Hingham.

A. rubra (Ait.) Willd. Woods, occasional from Norwood and Sherborn north and east.

A. rubra (Ait.) Willd., forma **neglecta** (Gillman) Robinson. Georgetown (*Mrs. C. S. N. Horner*, no date); Danvers (*J. H. Sears*, Aug. 11, 1884 et seq.).

ANEMONE.

A. canadensis L. Topsfield, Danvers, Wenham, Swampscott, Lexington, Concord, Newton, Waltham. Introduced at last station, perhaps at others.

A. cylindrica Gray. Dry hillsides and open woods; reported from 14 places north and west of Boston.

A. NEMOROSA L. Persistent and spreading about old S. P. Fowler garden, Danvers (*J. H. Sears*, May 20, 1903; May 6, 1904).

A. quinquefolia L. Meadows and wet open woods; common throughout.

A. riparia Fernald. Limestone shale, in John Peterson's pine grove near bank of Ipswich River (*J. H. Sears*, Aug. 25, 1901; July 1, 1902).

A. virginiana L. Open woods and roadsides; generally distributed, but not reported south of Hingham.

ANEMONELLA.

A. thalictroides (L.) Spach. Moist soil, common, but not reported south of Hingham.

AQUILEGIA.

A. canadensis L. Dry rocky woods and pastures, common throughout.

A. canadensis L., var. **Phippenii** J. Robinson. See Robinson, Fl. Essex Co. 30, 1880. Discovered by Mr. G. D. Phippen in a ravine in Salem pastures about 1844. Salem pastures (*J. Robinson*, May, 1873, specimen in herb. Peabody Academy of Science).

A. VULGARIS L. Garden escape, occasional.

CALTHA.

C. palustris L. Swamps and wet woods, very common throughout.

[CIMICIFUGA RACEMOSA (L.) Nutt. Reported from W. Gloucester in Robinson, Fl. Essex Co. 31, 1880, but no specimens are known to exist.]

CLEMATIS.

C. verticillaris DC. Ledges on Pine Hill, Middlesex Fells (*Robert D. Morss*, May 13, 1903, specimen in Gray Herb.; *Dr. Henry Piper*, May, 1904, specimen in herb. W. Deane); Roxbury (*J. A. Lowell*, May, 1847, specimen in herb. Boston Society of Natural History.

C. virginiana L. Swamps, thickets and roadsides, common throughout.

COPTIS.

C. trifolia (L.) Salisb. Swamps and wet woods, common throughout.

DELPHINIUM.

D. AJACIS L. Rubbish heap in woods, apparently spreading, Middlesex Fells, Stoneham (*F. S. Collins*, Aug. 8, 1885); reported in Dame & Collins, Fl. Middlesex Co. 3, 1888, and in Deane, Fl. Metrop. Park Comm. 5, 1896, as *D. Consolida* L.

HEPATICA.

H. triloba Chaix. Sunny slopes and open woods; common in Essex County, occasional elsewhere.

RANUNCULUS.

R. abortivus L. Woods and meadows, common.

R. abortivus L., var. **eucyclus** Fernald. Deer Leap, Andover (*A. S. Pease*, June 4, 1904); Topsfield (*J. H. Sears*, June 5, 1899; June 1, 1902); ledges, abundant, W. Roxbury (*F. G. Floyd*, June 12, 1902); moist shady woodland, Hyde Park (*F. G. Floyd*, June 17, 1900); low woods, a good-sized colony, Hyde Park (*F. G. Floyd*, June 1, 1902).

R. ACRIS L. Fields and meadows, common throughout.

R. ACRIS L., var. STEVENI (Andrz.) Lange. Boxford, Salem, Melrose, Lexington, Wellesley, Franklin Park [Boston].

R. allegheniensis Britton. Woods and ledges, occasional near Boston and Salem. Apparently common on diorite hills running from Salem to Lexington.

R. aquatilis L., var. **capillaceus** DC. Slow streams and ponds, occasional.

R. BULBOSUS L. Fields and pastures, very common throughout.

R. Cymbalaria Pursh. Salt marshes along the coast, occasional.

R. delphinifolius Torr. Quiet waters; occasional, but no reports from southeastern towns.

R. delphinifolius Torr., var. **terrestris** (Gray) Farwell. Muddy shores; Marblehead, Winchester, Middlesex Fells, Belmont, Concord.

R. fascicularis Muhl. Dry hillsides; common on diorite hills north and west of Boston, rare elsewhere.

R. FICARIA L. Garden escape at Cambridge (*W. Deane*, May 8, 1914); S. Hingham (*H. W. Cushing*, May, 1891, to date).

R. Flammula L., var. **reptans** (L.) Mey. Sandy shores; common in Essex County, occasional in Middlesex County; apparently rare or wanting south of Boston.

R. laxicaulis (T. & G.) Darby. Muddy places, Byfield [Newbury] (*J. H. Sears*, Sept. 18, 1886 et seq.); Sharon (*E. H. Hitchings*, Aug., 1884); Easton (*Oakes Ames*, Aug. 31, 1898).

R. micranthus Nutt. Rocky places; Peabody, Melrose, Stoneham, W. Roxbury, Milton, Sharon; Hingham, according to Bouvé, Botany of Hingham, in History of Hingham, i. pt. 1, 92, 1893.

R. pennsylvanicus L. f. Lawrence, above dam, north side (*J. Robinson*, Aug. 5, 1879); "near Boston" (*Wm. Boott*, Aug. 20, 1853;

Wellesley (collector unknown, June, 1880); Concord, according to Dame & Collins, Fl. Middlesex Co. 2, 1888. This is one of Minot Pratt's introduced plants. See Rhodora i. 171, 1899; Hingham, vide supra.

R. recurvatus Poir. Moist woods; occasional, especially northward.

R. repens L. Moist soil, common throughout.

R. sceleratus L. Wet places near the coast, locally abundant.

THALICTRUM.

T. dasycarpum Fisch. & Lall. Blue Hills Reservation (*G. G. Kennedy*, June 30, 1895, specimen in herb. G. G. Kennedy).

T. dioicum L. Rocky woods; common northward, few reports south of Boston.

T. polygamum Muhl. Meadows and swamps, common throughout.

T. polygamum Muhl., var. **hebecarpum** Fernald. Rich wet loam by brook, Manchester (*F. T. Hubbard*, July 15, 1913).

T. revolutum DC. Dry hillsides and open woods; Blue Hills and Walpole northward, rare.

ZANTHORHIZA.

Z. apiifolia L'Hér. Escaped from cultivation at Salem, Danvers and Concord.

C. H. Knowlton, Walter Deane } *Committee on Local Flora.*

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F. S. Mathews del.

Figs. 1–3, SABATIA KENNEDYANA; 4 and 5, S. DODECANDRA; 6–8, S. DECANDRA.